

Abstract

Holder for flat workpieces, in particular semiconductor wafers for mechanochemical polishing, which is coupled to a vertical driving spindle, with

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- a circular housing, which has a ceiling portion and a sidewall,
- a retaining ring which forms at least the lower part of the sidewall,
- a holding plate from rigid material, situated on the bottom side of the housing, which is coupled to the spindle and which has a top and a bottom side,

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- a flexible, relatively thin membrane, which is attached to the bottom side of the holding plate and forms with the latter more than three annular chambers (MK1 to MK6), arranged concentrically to the spindle axis.

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- at least one first channel inside the driving spindle, which is connectible to a regulated pressure source or to vacuum on its upper end and which is guided into the housing,

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- several electrically controllable on-off valves in the housing, which are connected to the first channel and via bores in the holding plate to each one chamber, and which are connected to an external electric control device via electric controlling lines and a rotational transducer, in order to generate a pressure profile varying in the radial direction during the polishing process.